

REMARKS

Claims 1-33 are pending in the application. Claims 24 and 25 have been withdrawn due to restriction. Claims 1-7, 10-20, 23 and 26-33 have been rejected. Claims 8, 9, 21 and 22 have been objected to as being dependent upon a rejected base claim. Applicants have amended claims 8 and 21 in this amendment.

Claim objections

Claims 8, 9, 21 and 22 have been objected to as being dependent upon a rejected base claim. The Office has indicated that these claims would be allowable. Accordingly, applicants have amended claims 8 and 21 by rewriting these claims in independent form incorporating the limitations of the base claim and any intervening claims. Hence, applicants believe claims 8, 9, 21, and 22 are in a condition for allowance.

Rejections under 35 U.S.C. § 102(b)

Claims 1-3, 5-7, 12-13, 15, 19, 23 and 26-33 have been rejected under 35 U.S.C. §102(b) as being unpatentable over U.S. Patent No. 4,214,993 issued to Forsythe, Jr. et al. (hereinafter “Forsythe”). Applicants traverse this rejection for a number of reasons.

Firstly, the Office on page 4 states:

The extraction cartridge 16 is seen to comprise at least three body portions and at least two bearing surfaces. The examiner has interpreted a “bearing surface” to mean any surface capable of bearing weight including slanted or tapered surfaces. The diameter of the extraction cartridge 16 varies from top to bottom and is thus capable of use with collecting tubes of different inner diameters.

With respect to the statement above, the Office states that the cartridge has at least two bearing surfaces. It is unclear as to which two surfaces the Office is making reference to when it states that the cartridge 16 has at least two bearing surfaces. In Forsythe, it is the middle portion 18 of the cartridge 16 that bears the weight of first container 32. Hence, the middle portion 18 of the cartridge 16 is a bearing surface. However, it is unclear as to what other surface in Forsythe is

considered to be a bearing surface by the Office since Forsythe discloses only one container 32 bearing on the cartridge 16. Forsythe does not disclose, teach or suggest the second container 36 bearing on the cartridge 16. The second container 36 bears on the first cartridge 32. If the Office is referring to an infinite number of bearing surfaces along the tapered middle portion 18 of cartridge, there is no way to distinguish one surface from another. Likewise, there is a lack of disclosure in Forsythe that collection tubes of differently-sized or substantially differently sized openings are capable of mating with cartridge 16 at middle portion 18 or any other portion for that matter. In Forsythe, the middle portion is not tapered for the purpose of mating the column with differently-sized collection tubes. Instead “the middle portion 18 is tapered inwardly towards the lower end to accommodate its being nested or stacked into the third element making up the nested separating apparatus of this invention, namely, the first cup 32.” Forsythe, col. 3, lines 36-40. Applicants own invention includes tapered surfaces each of which, according to the Office, also includes an infinite number of bearing surfaces, yet the bearing surfaces of the present invention are clearly described, claimed and discernable in the specification of the present invention. Applicants respectfully request the Office to clearly identify the second bearing surface or surfaces to which the Office is referring.

Secondly, independent claims 1 and 26 recite a filter column having a body with bearing surfaces adapted to seat on at least two collection tubes. To anticipate a claim, the reference must teach every element of the claim. MPEP §2131. Forsythe does not disclose, teach or suggest a filter column having a body with bearing surfaces adapted to seat on at least two collection tubes. Instead, the cartridge 16 in Forsythe mates with only one container 32. Forsythe discloses a cartridge 16 that mates with a first container 32 which in turn then mates with a second container 36. In Forsythe, it is the first container 32, not the cartridge 16, that nests with the second container 36 as shown in FIG. 1. Because Forsythe does not disclose, teach or suggest a filter column with bearing surfaces adapted to seat on at least two collection tubes, independent claims 1 and 26 and their respective dependent claims are not anticipated and not obvious in light of the prior art.

Thirdly, independent claims 1 and 26 recite a filtration column adapted to seat on collection tubes having differently-sized openings. To anticipate a claim, the reference must teach every element of the claim. MPEP §2131. Forsythe does not anticipate the claim limitation of a filtration column adapted to seat on collection tubes having differently-sized openings. In contrast, Forsythe discloses a cartridge 16 that mates with a first container 32 which in turn then mates with a second container 36. Containers 32 and 36 do not have differently-sized openings. The openings of containers 32 and 36 are of the same or substantially the same size. This is evidenced by the fact that containers 32 and 36 have upper portions (element 44 on container 36) sized to receive the same cap 10. “The first cup 32 has an enlarged upper portion which has the same interior diameter as the upper portion 20 of the extraction cartridge such that it may accommodate the same cap 10 if desired.” Forsythe, col. 3 lines 41-44. The second container 36 also includes an upper portion to receive the same sized cap 10. “This enlarged upper portion 44 has an interior diameter which is substantially the same as those of the enlarged portions of the extraction cartridge and the first container. In this manner the cap 10 may be used interchangeably with either of these three units.” Forsythe, col. 3, lines 53-58. It is clear that the first container 32 and the second container 36 have the same-sized openings to receive the same-sized cap 10. Therefore, Forsythe does not disclose, teach or suggest a filtration column adapted to seat on collection tubes of different sizes. Therefore, Forsythe does not anticipate the present invention.

For the reasons mentioned above, Forsythe does not anticipate all the limitation of independent claims 1 and 26 nor their respective dependent claims. Therefore, applicants believe that claims 1 and 26 and their respective dependent claims are in a condition for allowance.

Rejections under 35 U.S.C. § 103(a)

Claims 4, 10-11, 14, 16-18 and 20 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,214,993 issued to Forsythe, Jr. et al. (hereinafter “Forsythe”)

in combination with BIO-RAD, Life Science Research Products Catalog (1993), pages 57 and 60-63 (hereinafter "BIO-RAD"). Applicants traverse this rejection. In order to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. MPEP §2143.

The third criteria listed above states that the prior art references must teach or suggest all the claim limitations in order to establish a prima facie case of obviousness. MPEP §2143. Applicants believe that this criteria is not met for the reasons discussed above with respect to the rejection under §102(b). Applicants maintain that the prior art references do not disclose, teach or suggest all of the claim limitations of independent claims 1 and 26 which are also limitations included in the dependent claims rejected under §103(a). In particular, the prior art does not disclose, teach or suggest a filter column adapted to seat on at least two collection tubes having differently-sized openings as discussed above with respect to the rejection under §102(b). Therefore, the claims are nonobvious and in a condition for allowance.

In addition, the prior art does not disclose, teach or suggest the claim limitations of a hinge as in claim 10; a hinge being offset to the first end of the body as in claim 11; a second body portion that seats within a 1.5-2.0 mL centrifuge tube as in claim 14; a third body portion that is seats in a 0.5mL tube as in claim 17; the second body portion having an outer diameter between 0.32 and 0.37in. as in claim 16; the third body portion having an outer diameter between 0.25 and 0.27in. as in claim 18; and a filter column having microliter capacity of greater than 200 mL, a filter area greater than 1000m² and a height from a top of said body to a top of said second bearing surface less than 0.5in. as in claims 20. The claimed dimensions are significant because the filter column is designed such that it mates with various sizes of standardized microcentrifuge tubes that are now currently in large-scale production. This sizing allows for users to work with existing tubes without necessitating the purchase or use of specialized

microcentrifuge tubes. Other dimensions are significant as claimed because the filter column and microcentrifuge tube combination when mated together must be able to fit inside standard centrifuge apparatuses. The prior art does not appreciate, disclose, suggest or teach this advantage.

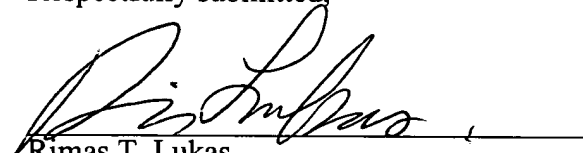
In view of the foregoing remarks, applicants respectfully submit that claims 1 and 26 and their respective dependent claims are nonobvious and not anticipated by the prior art. For these reasons, applicants believe that the application is in a condition for allowance, and action toward that end is earnestly solicited.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicant petitions for any required relief including extensions of time.

Respectfully submitted,

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